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Communications.

MINERALS.

EDITORS TIMES:

For the benefit of mineral hunters I will say the minerals of this country are not distributed over this country irregularly. There is a system in these distributions, the knowledge of which furnishes us with a rule by which we decide whether a particular kind of mineral may be expected to be found in a certain locality. The signs by which we judge whether a particular mineral is present at the place in question are the general characteristics of the rock in that locality.

The knowledge of the relations of particular minerals to the general character of rocks constitutes the science or Geology and the knowledge of the character of minerals that of Mineralogy.

The history of the formation of rocks has been divided into certain periods.

The Granite, or primitive, is the oldest or first formation, and diverse from all stratifications in this rock, we may expect to find the ores of tin, iron, copper, lead, cobalt, silver and anthracite coal. We also find feldspar quartz in beautiful crystals, plumbago garnets, heavy spar, calcareous spar and flour spar, and other matter but foreign to the rock.

Metamorphic rock is the second in age. To this belong a variety of minerals. Gneiss, mica, slate, clay-slate, limestone and other minerals in rocks covering tracts of great extent and at a great depth. The rock of this class is characterized by a partial stratification, but does not exactly belong either to the compact granite or to the stratified variety.

Metamorphic rock often assumes the appearance of granite pudding stone and is particularly distinguished by its close grain and strength from granite transition rock in this rock which is the most extensive in the United States. We may expect to find gold in S. Carolina and other southern states. We also find silver in this rock, also gold and the platinum metals together and iron of the best quality. In it we find zinc, antimony, arsenic, nickel, cobalt, tin, manganese. It is the home of the metallic sulphurets. The rock in what is known as the flat of the mountain some four miles from Montvale Springs, Blount County, is of this character, and from this flat on the south side of Chilhowee Mountain, to the Tennessee river, the indications of silver are perceptible; also the sulphurette variety near Samuel McMurray's on the river. Strong indications are met with at another point near the Bright saw-mill. At the foot of the mountain out-cropping of silver can be seen and across the mountain south of Montvale Mr. Engle has been digging and found beautiful specimens of sulphurette of silver. From my own observations the body of this mineral must lie deep in the earth and will require considerable capital to develop it. Again, some twelve miles from Montvale, near what is known as the Deadrick cabin several mounds in a straight line from the cabin in the direction of the Tennessee River can be seen. These mounds seem to have been raised or injected from below by the power of internal heat. They are composed of red hematite with veins of solid white quartz running through the mounds which indicates silver and lead and gold. But iron predominates on panther creek, rabbit creek, the Hannah mountains, and on the Ditny mountain and Smokey mountain large bodies of iron are deposited and many other beautiful specimens of various minerals.

STRATIFIED ROCK.

The rock of this period is the coal bearing rock—par excellence. We find here the richest and most extensive layers of mineral coal, all of the bituminous kind—a soft coal. In this formation we are to look for soft mineral coal, iron ore, limestone and salt. It contains none of the precious metals—no lead, no copper, no gold or silver nor any metal except iron and manganese, latter not available.

Tertiary formation is a stratified rock, but of a later period than the

preceding rock above named' and may be distinguished from it by shells and fossil remains of animals and plants, it containing no minerals in it. We may look in vain for minerals of worth. For a full description of the different varieties of rock the readers must refer to the science of Geology, and for a description of the minerals to Mineralogy.

The origin of minerals and their forms as veins or layers may be considered the result of infiltration to the surface to which class the iron deposits in Blount County, aside from the mountains, belong other minerals of mountain origin are injected from below, raised by the power of internal heat to which class belong the gold and silver ores of North Carolina and the copper of Ducktown belong.

The first class consists of wedges decreasing with the depth.

The second of spheroidal masses layers.

The third of wedges increasing with the depth.

The first class of veins is the most deceptive and cannot be depended upon.

The second may be measured by its appearance on the surface or by sinking shafts into it.

The third class may be depended upon as improving with the depth.

There are gold bearing localities in North Carolina, which, if not equal to those of California at present, will be of greater importance in the future, and I predict more sure and lasting. Throughout a vast extent of that State in almost every branch and along all the courses can be found wash gold, it comes from the sides of the mountain, and the abrasion of rock furnishes the metal and when the alluvial deposits are exhausted work is generally abandoned and the rich deposits in veins in the mountains are left undeveloped; there are no gold veins where alluvial deposits occur. To the injected veins of gold from below belong the pyritic veins also ferruginous veins. Gold in these veins have been raised and condensed along with other metals and sulphurets; it may be asserted as a fact that all native sulphurets particularly all the sulphurets of iron contain gold, it does not follow from this that all pyrites contain sufficient to pay for its extraction, as sulphurets cannot possibly penetrate any rock but from below, we may naturally conclude that the heaviest body of such kind of ore necessarily lie deep in the earth and all pyritic veins are invariably found to improve in quality and quantity with the depth. The gold of North Carolina is of the pyritic origin in composition with sulphurets. We have a belt of gold ores of unparalleled extent, immense width and undoubtedly reaching down to the primitive formation, which, on an average, cannot be less than 2000 feet deep. Here is a mass of precious metal enclosed in the rock which cannot be exhausted for ages to come, and in this respect the gold regions of North Carolina are the most important of all the known gold deposits of the world, California not excepted. Also near the gold region is found extensive mica mines which are at present being worked at a handsome profit. Cotton rock in abundance, iron of the finest quality and copper ore in Jackson county; a mountain of roofing slate near the line of Tennessee on Tennessee river, and great forests of the finest quality of timber. Here in these mountains lie inexhaustible treasures to be developed by intelligent man, and will Knoxville, our people, still refuse to complete the railroad from Maryville to the State line, and let these immense treasures be lost here forever. The Air Line road, North Carolina, is completed to the mouth of Tuckesege river, and unless East Tennessee aids the road will be extended to Murphy, Ducktown and Chattanooga, and we are left out in the cold.

SAM. J. GRIFFITHS.

Education.

My respectable audience, I avail this present opportunity to address you through the medium of a speech on free and compulsory education.

The object of common school education is ordinarily supposed to be simply the acquisition of knowledge, orthography, writing, reading, arithmetic, geography and English grammar. These are the simple elements which most children acquire in various degrees of fullness and accuracy. They are generally considered sufficient to fit men and women for the common responsibilities of life. These enables the possessor to transact the usual business

ness of the world, and every sane child should be required to understand them before they enter the years of maturity.

Beyond the mere knowledge of facts and principals, there are other advantages equally important and valuable, that grow out of the process of study and acquisition.

The training and discipline of the school quickens and energizes the whole mental nature, and gives it faculty of applying itself and its various faculties for manifold purposes.

The new energy given to the perceptive and reflective powers, by study in the schools, remains a permanent possession after the period of education shall have ceased, even though the lessons may have been forgotten. The boy in his plays abroad, men and women, their pursuits of happiness, find ceaseless occasion for their use and pleasure as well as profit in their exercise.

The eyes are opened, the dull vision becomes keen, the educated boy or girl becomes an observer, and sees things which the unawakened eye and untrained mind pass by without notice. The reasoning faculty is also quickened, and the nature, relations and purposes of things are studied. Thus people become unconscious philosophers in their several ways with various depths of insight into the character of the matter that comes before them. Life is a perpetual opportunity for study presented to our attention. The earth and all surrounding objects, the world and its circumstances are or may be unceasing subjects of observation and reflection. People and animals and their conditions are ever offered for our thought. The mind perceives these with more or less care and accuracy just according to its education and habit.

[to be continued.]

Political Economy.

MARYVILLE, Dec. 27, 1884.

EDITORS TIMES.

In my last letter I said I would lecture on Political Economy, that is if I know what that means. Concerning this knotty complex subject, I am afraid that the great majority of the people are as ignorant as myself; and, also, I believe, they could not, with any certainty, commend me if I should teach them right or criticize me if I should guide them wrong. However, I will say something, as I usually do, and if my talk don't satisfy the public I will let some other philosopher try his hand.

A few days ago I left home and thought I would ride out into the city to loaf and to talk politics, (here of late I cannot do this as pleasantly as I would like, for I am continually being nudged by the merchants to buy goods, or to pay for what I have already bought,) and as soon as I came out into the big road I overtook a man and team "stalled" with a load of wood, and while the driver was whipping his horses, (or teaching them what Political Economy was by beating them over the head) there was some idle men by the roadside and boys of wealthy families who had been out rabbit and bird hunting who had come out of the neighboring fields more, it seemed to me, to have some sport with the misfortune which the wood-hauler had got into. So I got down off my horse and laid my shoulder against a wheel (or at least my hand on a spoke) and so I ordered the big burly driver down off the load of wood, and I also called on the idle men to lay hold of a wheel also, and we went up the hill screaming (though the mischievous boys on the fence made most of the noise).

Now, Mr. Editor, don't you think this was just as honorable as a regiment of soldiers going up a hill storming a fort, wherein perhaps half of them would have got killed before they reached the top and the rest would have done no good when they arrived there. There is I believe two opposite kinds of labor going on among men forever; one kind without capital, it would seem, producing all things, and the other supported by capital consuming down and producing nothing; and the idea seems to be with some that if we can give employment to the idle it will be all right, whether we take into consideration what that is or not, it will be all for the best; and whatever trade a man follows he wants the people to patronize him. I think with money we can hire men to do almost anything, and while we are bragging on our wealth as a nation, poor people and paupers are increasing too fast, because our condition at this time as a nation is more favorable to avoid this

than it will be twenty or fifty years hence. You see for the last fifty years, as the older states became thickly settled up, there has always been a chance for a man of limited means to get him an home in the West, and while this lasts, we can live under any sort of government. So while we have been breeding paupers, like England and some of the older countries, under favorable circumstances, what is to become of us under conditions just the reverse, which is almost inevitable.

You see most all Europe, for the last century or two, has been breeding paupers, like a dead dog would skippers in a hot summer day. During all this time she has enjoyed the same advantage that we have by sending her paupers to this country. When our western states become crowded like the eastern states (and that will not be many years), won't the poor people increase in our midst that much faster, and it will be with that class of people then like Parson Brownlow told the Union men of East Tennessee in time of the war, when the rebel stopped his paper, he said, he felt about as helpless as a cat in hell without claws.

On this subject, before I close, I think it would be appropriate to quote a prophesy from "The Fool," in King Lear, of Shakespeare's Works:

"When priests are more in word than matter, When brewers mar their malt with water, When nobles are their tilters sutors, No heretics burned but wenches sisters, When every case in law is right, No squire in debt, nor no poor knight, When slanders do not live in tongues, Nor cut-purses come not to throngs, When usurers fill their gold in the field, And bawds and whores do churches build; Then shall the realm of Albion Come to great confusion. Then comes the time, who lives to see it, That going shall be used with feet."

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